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THE RELATION
OF
PHILOSOPHY TO SCIENCE,
PHYSICAL AND PSYCHOLOGICAL.

An Address

DELIVERED BEFORE THE ARISTOTELIAN SOCIETY,

OCTOBER 20, 1884

(BEING THE ANNUAL PRESIDENTIAL ADDRESS FOR THE SIXTH
SESSION OF THE SOCIETY),

BY

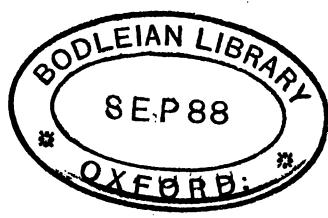
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The Relation of Philosophy to Science, PHYSICAL AND PSYCHOLOGICAL.

I.

WE re-assemble to-night, for the first time at the beginning of a Session, in our new quarters in Albemarle Street. I hope it may be the first of many Sessions to be held in the same place, and prove in fact to mark the close of the nomad stage in our history, and the opening of a period of steady and united progress. Indeed I think that indications are not wanting of greater homogeneity and definiteness in the aims which we set before ourselves as a Society, and also that we can now form a tolerably clear notion of the means at our disposal for realising them, including more particularly the amount and kind of aid which we are to look for from without. We issued last Session what I may call our appeal to the general public, in the shape of a Circular stating our aims and objects as a Society, and inviting all who took a genuine interest in the serious investigation of philosophical questions to join us. That appeal gained us many new and valued members. Thereby we placed the Society, as we hope, on a definite and sound basis. We now know on what we have to depend for our future prosperity as a Society. We know that we are not to look, for any further accession of members, to any general appeal of the same kind again. The work which we do within our own walls, and

the influence which individually we can exert over those with whom we may come in contact, must henceforth be the means, the gradual but I trust the sure means, of increasing the numbers and extending the influence of the Society as a whole. Ultimately, therefore, it is on the reality of the benefit which we are each conscious of receiving from the discussions of the Society, that our prosperity as a Society depends. And this benefit can only be received individually from the discussions, if we contribute individually, by steady and continued mental work, to make the discussions genuine and thorough. I mean, that the fortunes of the Society, and the work which it can do towards the maintenance and spreading of true philosophical thought, are henceforward in our own hands, and in our own hands only. We are the first and only Society in this country, so far as I know, which has arisen spontaneously, and unconnected with any College, University, or other public body, "for the systematic study of Philosophy."

I could have wished, indeed, that the appeal which I mentioned had procured us more numerous additions from the ranks of those who are or have been professionally employed in the teaching of the various branches of our own subject, of Mental and Moral Philosophy, Logic, Psychology, and Ethic. I could have wished also, that a greater number of scientific men had joined us, in response to that appeal. Philosophy has an independent message to science; an independent message to convey, as well as an independent message to receive. For however true it is, that science proceeds from definitions and by methods of its own, which are justified by their results, yet the moment you begin to reflect on the source, the validity, and the range, of the ultimate conceptions which it employs, such as those of number, measure, quantity, matter, motion, force, energy, cause, and the like, you are

necessarily examining science on its subjective side, as a process of *knowing*, and are thereby treating science itself as an object of philosophy.

Again I should have rejoiced to welcome as our members more of those for whom, from their professional character, the questions which are especially connected with religion have pre-eminent interest. The old intellectual framework of religion, the old Theology, in Aristotle's sense of the term, the old bottles, so to speak, into which the new wine was poured at the beginning of our era,—this old intellectual framework has given way, in the natural course of man's intellectual development, and is being slowly but surely replaced by new forms and modes of thought. The gradual demolition of the old, the gradual formation of the new, intellectual clothing or body of the old incorruptible spirit, are philosophical processes in which we are called to bear a distinctly conscious and intelligent part. I could have wished, therefore, that we had attracted more professed theologians, that is to say, students of man's relations to God, as well as more professed men of science in both its great branches, the group of human or moral, as well as the group of physical sciences, into our ranks;—these two classes, of men of science and theologians, being the representatives, and as it were the double vanguard, of all human progress, one in the direction of pure knowledge, the other in that of morals and aspiration; and one main function of philosophy this, to discern and manifest the unity between them. All we can say is, that to those who *have* joined us from each of these classes, as well as from that of professed teachers of philosophy, the warmer welcome is extended. Would only, that I had not here to mix with welcome the expression of our keen regret for the premature death of one,* whose active participation in the work of

* Mr. Walter Raleigh Browne, at Montreal, Sep. 1884.

last Session seemed to promise, that he would equally adorn the ranks of this Society, as he already adorned by his talents the profession of his choice.

For let us not conceal it from ourselves, the position of philosophy in this country is not a recognised one. We are a nondescript tribe ; a small tribe ; a tribe which has to grow by accretion, by attracting to itself new members who, in many and perhaps most cases, have already intellectual homes and intellectual affinities elsewhere. To the ordinary Englishman of culture we appear as a rare and inexplicable variety of the *dilettanti* species. A friendly acquaintance said to me only last summer, alluding to this Society, "By the way, haven't you joined a kind of debating club?" "A debating club!" I replied ; "I have the honour to be President of one of the learned societies of London, if you please." And considering what a very miscellaneous company of societies, from the Royal to the Shorthand, is covered by the term, I did not think I was exorbitantly ambitious in laying claim to it. But you see that even our right to rank as a learned society would be contested by any one to whom, as to most Englishmen of education, it had never occurred to regard philosophy as a definite pursuit, based on a definite method, and having thereby a definite position by the side of and beyond all other recognised branches of scientific investigation. For the rank of this or any other Society must depend first and foremost, other things being equal, on the rank of the subject which it makes its study.

Now philosophy claims, and always has claimed the very highest rank among all intellectual pursuits. It receives contributions from all the rest, and then by reflecting on these contributions, and their relations both to each other and to the process and nature of *knowing*, as such, it brings them, as it were to a focus, and arranges

them in a scheme which embraces the whole body of experience, the whole of the phenomena of the universe, so far as these are in any manner or any degree within the ken of human speculation. But the claim of philosophy to this rank can only be substantiated,—and this is the point I would insist on as important,—the claim can only then become a reality, a well grounded and justly recognised claim, if philosophy is in possession of a definite method, as well as a definite object, a method by which it can really proceed to *do* what it aims at doing, by which it can reflect on the contributions, new as well as old, and on future ones as they arise, made by other pursuits, that is, other sciences, and weave them into a living and ever growing web of philosophical system. It must be a method at once distinctive of philosophy from science, and common to all philosophical workers. It must be no single principle or hypothesis, which contains its results implicitly in its commencement, but a method which can be applied to examine and judge phenomena, and applied by all, irrespective of the use they make of it, and the results which they bring out. In other words, it must leave the investigation of the phenomena perfectly free and unfettered, giving scope for individual differences of opinion within the method which is common to all, just as any special science gives scope, within the bounds of scientific method, for the most divergent theories respecting its subject-matter.

Of all kinds of knowledge, philosophy is the one which is most completely dependent on the interrogation of consciousness as such, its acknowledged test being that of immediate evidence to the individual enquirer. The disappearance therefore of differences of opinion, springing from differences of idiosyncrasy, or habit, or the use of different languages, and so on, in individual observers, is by no means to be anticipated. The bane of philo-

sophy has hitherto been the prominence given to these differences of idiosyncratic origin, by the adoption from time to time of some principle which has seemed self-evident, now to one man of genius, now to another, as a principle of universally applicable method, although it was really a principle which carried in itself implicitly a whole constructive system, and was therefore a principle, not of method simply and solely, but of much more besides. The problem for philosophy is to find a principle of method, which shall be universally applicable, and yet shall be a principle of method and no more, which, not being of idiosyncratic origin, shall not involve idiosyncratic results, which are really due to the principle adopted, and not due to the facts examined, or subject-matter.

At present, it must be owned, there is but too much excuse for the ordinary Englishman of culture, when he denies the claim of philosophy to be a definite pursuit. At present there is no philosophy, because there are too many philosophies. There is no philosophical method, because there are too many philosophical first principles. There is a wrangling of sects instead of a catholic church. The aim of this Society must be to alter all this; not to make a new sect, but on the contrary to discover the true method; this ought to be our first and foremost aim, because it is the necessary preliminary of all true progress in philosophical thought. The true method, if it can be found, is destructive of sects, and the parent of a general and progressive philosophy, in which all who adopt the method can take part. I fear however that we have to reckon, not only with indifference from without, but also with what in one sense is the opposite of indifference from within; I mean too little indifference to results, too much addiction to the particular principles of particular schools. To those who are satisfied with this state of things, as well as to those who are confirmed

disciples of any existing school, or of a school of their own, and therefore look forward to seeing or making that school triumphant, the search for a method such as that I have described must seem worse than superfluous. I do not think that this will be the view taken by this Society, and therefore it is that I once again moot this great question, and venture, as a contribution towards its solution, to submit again to your consideration that particular method, which seems to me to answer the requirements of philosophy at the present juncture, leaving it for you to form your own opinion of its merits; that method, I may remind you, being briefly definable as "*subjective analysis of objects of consciousness by means of the distinction between conditions of their essence and conditions of their existence;*" a definition which was obtained in my third Address "The Method of Philosophy," and repeated in the following one, the Address for last year.

[The method* is distinctive of philosophy from science, not because of its two questions, *what* and *how comes*, or "conditions of essence" and "conditions of existence," being put to phenomena successively and in that order, but because it puts those questions to objects of consciousness as such, that is, to objects forming the immediate content of consciousness. To put these two questions and to put them in that order are simple dictates of good sense, obeyed almost unavoidably, and at any rate obeyed both in common-sense enquiries and in scientific, equally as in philosophical. Only in philosophy they are put with distinct consciousness of the fact that, and the reason why, they are put; and are also put to objects as forming part of the immediate content of consciousness, and thus constitute its method of subjective analysis.]

* The parts within brackets were selected for omission in delivery, in order to bring the Address within due limits of length.

Accordingly I will resume the thread of the subject, where it was dropped at the conclusion of my last Address, the result of which, you may remember, was to exhibit the distinction between what I called the two senses of *Reality*, one in which it denoted objects as perceived, or the *percipi* of objects, the other in which it denoted objects as conditioned or conditioning, that is to say, their dependence upon, or their place and function in, an order of *real conditioning* or causation. [But first I would remark, that the result thus obtained, namely, the distinction between the world of objects, simply as perceived, and the order of real conditioning to which they belong, with its consequence, the two senses of the term *real* as applied to objects, is not a simple deduction from the distinction which is the principle of the method, but follows from the application of that principle to the facts of experience, from putting the questions *what* and *how comes* to those facts successively. The question *how comes*, when put to the facts, leads us to discover in their genesis, that is, *within* the question *how comes*, an order of *real conditioning*, distinct from the order in which the objects are perceived originally, as immediate objects of consciousness. And since this result is in harmony with experience, as given both by common sense and by science, it represents a real advance in knowledge by means of the method, a new stage or foothold, so to speak, from which we may proceed to apply the method again, by again putting its two questions, *what* and *how comes*, successively.]

Upon this distinction, then, I propose now to build, applying it for the purpose of demarcating the province of philosophy from that of science, and more particularly from that of psychology, which of all the sciences is the one most closely allied to philosophy, and occupies a definite territory in common with it. What this territory

is, we shall see later on. It is clear that the demarcation of boundaries is a question of method, and also that this particular demarcation is the proper business of philosophy, since philosophy is that general science which embraces all others, along with itself, in its purview. I shall thus, I hope, make evident to you the applicability of the method which I am explaining to one of the most vital questions of philosophical controversy.

II.

CLAUDE BERNARD, in that most profound as well as luminous work, his *Introduction à l'étude de la Médecine Expérimentale*, thus expresses himself on the limits of knowledge: "The nature of our mind leads us to seek the essence or the *why* of things. In this we aim beyond the mark which it is given us to attain; for experience soon teaches us, that we cannot go beyond the *how*, that is, beyond the proximate cause or the conditions of existence of the phenomena. In this respect, the limits of our knowledge are the same in the biological sciences, as in the physico-chemical." (Second Part. Chap. I. § 9, p. 137-8 of the edition of 1865.) And presently he adds, taking an illustration, I believe, from one of his own great discoveries: "If for instance in physiology we prove, that oxyde of carbon kills, by combining more energetically than oxygen with the matter of the blood globule, we then know all that is possible for us to know of the cause of death." (*Ibid.* p. 139.)

I have quoted this passage in order to bring out the great general difference between the two domains of science and philosophy. It is perfectly true, that the scientific interest is to know how to get at the proximate cause (*cause prochaine*) of phenomena, how to avoid aiming beyond (*viser plus loin*), i.e., at the essence or *why*

(*pourquoi*) of things. But the philosophical interest is to know how it happens (1) that we form the idea of the *essence* or *why*; (2) that we imagine it to *exist*, though unknowable by us; (3) that we place it somewhere beyond (*plus loin*) the proximate cause or conditions of existence (*conditions d'existence*) of the phenomena; and (4) that we identify this "essence" with the answer to the question *why*. In other words, the special interest of philosophy *begins* where that of science *ends*, with the *fact* that "the nature of our mind leads us to seek the essence or *why*." We want, in philosophy, to know the "how," the "*com-ment*," of this process of our "mind," when it so leads us. What is the analysis, within consciousness, of this peculiar process? But note, that this "how" is not the "how comes" of science, but the mere "what" of a process of consciousness, since the analysis of *a process* is that which shows *how* its parts are related to one another. The whatness of the process A—B is the how of B, its *terminus ad quem*. Such is the nature of the philosophical question, which is quite distinct from the scientific question, and at the same time in perfect accord with it.

Having thus obtained a general idea of the distinct purposes of the two pursuits, I proceed to show you the peculiar importance of the distinction previously established, between the world of objects immediately present to consciousness and the order of real conditioning, comprising the further distinction between the two senses of *reality*, the two senses in which objects are called *real*. Its importance consists in this, that it enables us to draw the line of demarcation between philosophy and science. Of course I use the term *science* collectively, meaning the sciences one and all, from psychology at one end of the list to dynamics or kinetics at the other. One and all, what they seek is to determine the order of real conditioning, affecting their several groups of phenomena, that

is, the particular kinds, quantities, interactions, and combinations of forces, upon which the varied play of common-sense phenomena depends, and without which that play would not take place as it does take place.

Mathematic stands on a peculiar footing; in its two branches of geometry and calculation it forms the link between the positive physical and physiological sciences, on the one hand, and philosophy on the other; for it is founded on the formal elements in consciousness, spatial extension in its geometrical branch, and the act of attention dividing time, which is numbering, in its arithmetical or calculating branch. At the same time these elements of consciousness are also elements of things conceived as external to consciousness; the surface of an orange, for instance, is identical with the surface *seen* and the surface *touched*, that is, with the surface in our sensations and representations of sensation. Again, an act of attention, once performed, is performed for ever; not even God, it has been said, can make the done undone. That is the subjective root of the objectivity of Number.

But distinct from, though founded on, these sciences of pure mathematic, all the other positive sciences seek the *real conditions* of things, and rest when they have discovered them. The first business of any science is to discover, in what the real conditioning, governing its phenomena, consists. This it does tentatively, by hypotheses, connected into theories, and verified by observation or experiment on the phenomena. Till this real order of conditioning is discovered, the science can hardly be said to be constituted as a positive science; at least has not reached its state of full maturity. It is a mere grouping of phenomena held together by some *hypothetical* real condition, as for instance the vortices in astronomy. Gravitation was a *vera causa*. After this the search ended; the science was established; notwithstanding that the intimate

or (so to speak) the *noumenal* agency, the *essence* of the agency, in Claude Bernard's sense of the term, was still unknown; and quite as much unknown in the case of gravitation as in that of the vortices.

So also in chemistry. What is the real process which takes place, when, for instance, two gases combine; and what are the ultimate portions of matter which enter into the combination? It is questions of this kind which are the fundamental ones for chemistry. So in electricity. What exactly is it that happens, when the electric circle is completed, or when one body communicates electricity to another? So in biology. In what consists that tension and movement, that organic loss and growth and repair of parts, which constitute what we call the *life* of an organism? Everywhere in science, it is the real and for the most part hidden processes, and the real and hidden ultimates between which they take place, and upon which the obvious, or rather the common-sense phenomena of daily experience depend, that are the objects of search. First, science seeks to discover what these processes and these ultimates are, and then to carry to further completion its knowledge of their effects, both actual and possible, in common-sense phenomena; which latter stage of enquiry marks the maturity of the science, its full fruit-bearing period.

Admitting this as a brief description, sufficient for our present purpose, of the true aim of science, and allowing that it falls in with our great distinction of method, by assigning to science the discovery of the order of real conditioning, the next point for consideration is, how we bring this search for real conditions into connection with the correlative member of our distinction, the world of objects, taken simply as percepts, that is, immediate objects of consciousness.

In the first place it is clear, that the double task, first,

of analysing the latter world, and then of determining the relations between its own special work of analysis and the work of science, belongs to philosophy. It is philosophy which draws the distinction between the two worlds in the first instance, in consequence of its putting the question *what* to experience. It is philosophy, not science, which perceives in the first instance, that by things are meant *known* things, or objects of knowledge, and thus distinguishes, without separating, *knowing* from *the known*. All further relations made out between this pair, of which the present correlation between the world of immediate perceptions and that of real conditions is an instance, must proceed on the basis of that originally philosophical distinction. The philosophical conception of a world of immediate perceptions thus comes to throw an entirely new light upon the scientific conception of real conditions. There is, in knowledge, no road from unknown things to knowledge, but there is from knowledge to unknown things. This fact gives the primacy to philosophy over science, in the realm of knowledge. In order to investigate real conditions, you must first either assume them or infer them. Philosophy throws light on this necessity. Science takes things exactly as it finds them in ordinary common-sense experience, and knows no more of their connection with that world of percepts immediate to consciousness, than the man of ordinary common sense knows; and yet that perceptual world, the only world we are ever immediately conscious of, is the only material, so to speak, of which that common-sense world, which we seem to know so well, is composed; the world, I mean, of *mixed* objects, objects made up of sensations and real conditions mixed together and undistinguished; the world of things and persons, events and actions, as commonly understood.

[But now to show somewhat more particularly the

mode in which philosophy brings the two members of its distinction into correlation.] And here we come upon the beginning of the whole matter in actual experience. The world of common-sense objects, just described, is our starting point historically, in philosophy, as it is in science; it is the common starting point of both; but there are two ways of starting from it. One is by assuming its objects to be ready-made existents, and examining their relations on that footing, which is the way of science; the other is by examining its objects as they are known to us, that is, examining our *knowledge* of its objects, which is the way of philosophy. It is owing to this its primary assumption, this its original choice of road from the common starting point, that science is debarred from explaining the connection between real conditions and the world of knowledge. No such assumption bars the road of philosophy. But on the other hand philosophy necessarily renounces the search for real conditions, at least for real conditions of any kind which can come within the scope of science, or be the objects of scientific hypothesis or verification; and contents itself with the analysis of knowledge generally, including a knowledge of the connection between the search for real conditions and analysis itself.

[When,* therefore, we say that we must begin with philosophy, if we would explain the position and function of science, because science is precluded from knowing more in this direction than common sense already knows,

* For the part here omitted the following short transition was substituted in delivery: Time compels me to omit what I have written here, concerning the steps by which we first analyse the world of common-sense objects into a stream or moving panorama of consciousness, and then secondly place the analysis of this second world, the stream of consciousness, over against the former one. But enough, I hope, has been said, to show at any rate where the conception of real conditions has its origin.

we mean that the road is barred, to common sense and science alike, by an assumption which is natural enough to common sense, and never retracted in science, I mean the assumption, that common-sense objects are ready made, or technically *absolute* existents, that is, have an existence *per se*, though not of necessity wholly unconditioned, besides the existence which they have as known to percipients, that is to say, in relation to a certain class among themselves, namely, to those of them which are endowed with sensibility. This assumption is, I do not say false, but premature; it is false *as an assumption*. To refuse it is distinctive of philosophy, and opens that road to philosophy which is barred to science, though both alike start from the same ground of common-sense knowledge, the world of which every man finds himself a denizen, when he first comes to years of intellectual discretion and enquiry. In starting from this world and analysing it on its subjective side, we are virtually, though not actually, reconstructing the history of that forgotten period of our own lives, beginning with the earliest days of infancy, during which our knowledge of it as a world of common-sense objects was originally built up. I mean, that we now begin to analyse that knowledge, including the ideas and feelings connecting its several parts, which we have been accumulating and organising from infancy onwards, without then reflecting on the fact that we were building up a systematic world of knowledge, as well as acquiring an acquaintance with what appear to us as "absolute" persons and things. We can never trace the steps of its acquisition in their actual history, because they have long faded from our memory; we can only analyse them in their result. But then we are also at the same time continuing that history, even while we are analysing its past results; and in the first and subsequent moments of philosophical reflection, we can look back, from time to

time, upon the course immediately before traversed, while it is still fresh in memory.

This brings us to the central fact, or cardinal operation, in all knowledge. Reflection, taken in its simplest form, or lowest terms, is the act or moment of consciousness, an act continually repeated, in which we look back upon the state of consciousness immediately preceding it, without which act the preceding state would be no more to us, than if it were a state of consciousness in another person, or a feeling in a severed limb. The preceding state taken alone is not to be regarded as below the threshold, or out of consciousness, altogether. It is more than a state of the organism simply. It is strictly a state of consciousness, but not yet of *our* consciousness; belonging not to *us* as a whole, but only to a part of us, an organ not in full intercourse with the rest. The next step towards completion of the intercourse is the arising of reflection, which is therefore strictly to be described as consciousness of states of consciousness, or consciousness conscious of itself, or having itself, not the conscious being or agent, except incidentally, as its object. When we use the term *we* to describe this process, as in saying “*we* look back,” the term *we* is of course used proleptically, in anticipation of a future justification, since it is a term of common sense as yet unanalysed, and therefore to be taken in philosophy as a term simply designative of the facts intended. And the same may be said of the verbs as well as the nouns which we employ in the description, *perceiving*, *looking* back upon, *being conscious* of, and so on, as well as of *we* the agents, and *things* the objects of the process.

But now to go a step farther. Philosophical reflection, which is reflection distinctly conscious of asking the question *what*, and that question only, of the phenomena presented to it,—philosophical reflection looking back upon its previous history, that is, prior acts of reflection

and the content of consciousness perceived in them, becomes aware, that reflection therein gives us what we may call a varied stream of consciousness, consisting of feelings of all kinds, extended colours and pressures, as well as feelings having duration only; and not of presented feelings only, but of represented also; not isolated but in combinations and groups; in fact, a full and varied picture, changing its content from moment to moment. This picture or stream, given in reflection, is also perceived by philosophical reflection to be the counterpart or equivalent for the common-sense world of objects, to be in fact the matrix or the material out of which the knowledge of the common-sense world of objects has been and is still being produced; so that we have, as it were, two worlds before us, the common-sense world with which we began, and the varied stream or picture, woven out of consciousness, which is now seen to be its perennial source, so far as our *knowledge* of either of them goes, apart from the causes or conditions which may have produced, or may still sustain and govern them.

Philosophical reflection next proceeds to analyse this new world which it has discovered, and to analyse it in connection with the common-sense world, so as to have in either analysis the means of controlling the other. The work of simple reflection is taken up and continued by philosophical, in its conscious comparison of the old world with the new. Both worlds are *objective* to both stages of reflection, but the important point to notice is, that it is only the new world, the varied stream or picture of consciousness, which is in all its parts their *immediate object*. To reflection a representation is as immediately present as a presentation. Presentations are usually more vivid, but they are not more immediate. When I look at a tree, for instance, a coloured surface is presented, the solidity and the unseen sides of it are represented. But those representa-

tions, whenever they are actually represented, are immediately present to reflection. When, however, we look at the tree as a common-sense object, we do not actually repeat all the representations which are involved in the knowledge of it. The word *tree* is a shorthand or symbolic expression for the result of a long history of presentations, associations, and thoughts; and therefore the object, the tree itself, contains much that is *not* immediately present to reflection, and can become so only by being, and while being, referred to the *other* world, the stream or picture of consciousness, in contrast to the world of common sense. This fact gives much scope to fancy, and indeed trees were at one time thought to *be* trees, by having Dryads or other living beings inside, to animate them.

Common-sense objects, then, as such, are not immediate objects of reflection. It is only their component parts, by which I mean of course the component parts of them *as known* to us, that is, the various presentations and representations which compose our knowledge of them, which are such immediate objects. We speak, indeed, as if the tree itself, when actually seen, was immediately presented to us; but we do so only because we habitually think in common-sense terms, and because we regard ourselves also, the *we* spoken of above, as being common-sense objects in presence of the tree, as well as the tree in presence of ourselves. But the *we*, or self, requires philosophical analysis, just as much as the tree does. Both alike are objects of reflection, but also both alike are remote, not immediate, objects of it. Parts of them only are immediate objects, and in order that all their parts may become so, it is requisite to refer them to their original source in the stream of consciousness. Thus, to reflect on the world of common-sense objects is the same thing as transforming it, for and during the reflection, into a stream of consciousness; and to reflect on the stream of conscious-

ness is to subject every part of it successively, whether it be a presentation or a representation, to immediate inspection, and so make it immediately objective.]

Standing on this distinction between the two worlds, we shall now have no difficulty in seeing where the notion, or fact as known to us, of real conditions has its origin. It is clearly in the world of common-sense objects, and not in the stream of consciousness. The tree as a common-sense object is the real condition, along with other common-sense objects and circumstances, of the production of fruit ; that is to say, is that object or combination of objects, without which there would be no fruit, or on the existence of which the existence of fruit depends. The existence of the fruit is conditioned *inter alia* upon the existence of the tree ; it is not conditioned in any way upon the analysis of the tree into a group of presentations and representations. Nor again does the subjective analysis of the fruit in any way depend for its existence upon the subjective analysis of the tree. If you want fruit, you must not analyse a tree but plant one.

It is true, that the possibility of my analysing the fruit or the tree depends upon my perceiving them, and that they cannot be perceived at all without being perceived as percepts of such and such kinds ; a content of some sort being bound up with every act of perception. But it does not follow, that the act of perception depends upon its content. It depends partly upon the percipient, partly upon the thing perceived, both being taken as common-sense objects ; and the part which each of these two real conditions of perception contributes to the perceptions, which are the result, is among the more abstruse questions relating to real conditioning, in the department of Psychology. When we take account of the percipient as a real condition of perception, we find that the *thing perceived* means that set of real conditions which, in conjunction

with those in the percipient, produce in the percipient the perception which we call a fruit, or a tree, or other perceived object. Such, I take it, are the original meaning and the original source of the notion of real conditions. The term is originally appropriate to those common-sense objects or events, without which other given common-sense objects or events would not, and with which they do, take place or come into existence.

Now these considerations introduce us to one of the most important distinctions in philosophy, and especially so in the delimitation of philosophy from science; I mean the distinction between *objective thought* and *objects thought of*. Take any common-sense object, a material object for instance, and place it by reflection in the two worlds spoken of, and you will find that the first stage on the road to its complete philosophical analysis consists of objective thoughts,—thoughts objective to consciousness,—while at the same time the object itself, the common-sense object, becomes an object thought of, namely, the object of those thoughts. It is doubly objective; it is one half of the whole object of reflection, and it is the whole object of the other half, the objective thoughts. *They* are the analysis, *it* is the unit analysed. The tree, for instance, is the unity of the objective thoughts which I bring successively into immediate objectivity to consciousness, as composing in combination the tree itself as known to me. The tree is the name for their combination into unity, as an individual unit. But then, at the same time, when I consider, that these thoughts are *my* thoughts, that they are combined in *my* consciousness, their unity seems to be not in them but in me. The tree has two apparent places of existence, one in its percipient, the other in space outside its percipient, as if it was a tree in a mirror. Now which of these is the real tree? Idealists answer,—the mirror-tree, the tree in the per-

cipient. I think, however, we shall see reason to give the other answer, namely, the tree in space outside the percipient, as object thought of, and distinguished from objective thought, when we consider, that the power of real conditioning falls on that side, and belongs to the tree, not as composed of perceptions of ours, but as a common-sense object in presence of, and combination with, other common-sense objects which fill the world of space.

For put the same question to the percipient, taken as a common-sense object, which you put to the tree, and you will find that it also breaks up into objective thoughts and object thought of; and if you say that the objective thoughts are the real percipient, you have no answer to the question, what gives them unity, or where they exist; since the percipient is then their creature, and receives from them its unity, instead of *vice versa*. And yet, starting from the basis of common sense, percipients are among the real conditions of perception. I have no perception of a tree, for instance, unless I am in presence of it, and possess bodily organs of sense perception. In short, where do Idealists find a percipient at all, in any real sense? They cannot say: In self-consciousness, or reflective consciousness of perception; for that is a moment, or act, of perception, continually repeated, and indifferent to all kinds of content; there is no agent, no *substantia*, perceived or perceivable in it, taken as an immediate object of consciousness. Where does its numerical unity come from; whence its grouping and combining power? In other words, there is nothing in the act of reflection,—and reflection, I would remind you, corresponds to Kant's *Apperception*,—which in any way answers the description of a real condition. This we see, as soon as we apply the principle of method to interrogate the phenomenon. And yet we know from com-

mon sense, that a real condition of some sort must be involved, and therefore are not easy till we can say what it is. Confusion of the reflective centre, or more strictly, constant feature in consciousness with the psychological centre or centres, localised in the conscious being, is the most fruitful source of fallacy in philosophy. Unless there was a psychological centre, there would be no constant reflective act; it is its *real* or efficient condition. Unless there was a constant reflective act, there would be no knowledge of the psychological centre; it is its making known or *revealing* condition (*conditio cognoscendi*). This relation involves no logical difficulty; the universality of consciousness does not clash with its particular genesis in individuals. But to confuse the moment of reflection with the moment of origin is to raise a question of priority between consciousness and its objects, a question as hopeless as the old puzzle,—which were first, hens or eggs?

Percipients, then, are originally, that is to say, on the common-sense basis, as much objects of common-sense perception as the things around them, and also have in common with them the property of being links in the order of real conditioning. They contribute their part to the perceptions which compose our knowledge of the common-sense world; and also, like the rest, they contribute thereto in their character of objects thought of, and not in that of combinations of objective thought. The conditioning power of things, whether percipient or non-percipient, belongs to them as objects thought of, distinct from our knowledge of them. This result is the basis of our broad distinction between philosophy and science. For the work of science consists, as we have seen above, in the discovery of real conditions; and real conditions have now been shown to be involved in the objects of thought, as existing independently of our

knowledge of them, or in other words, abstracting from the subjective or philosophical analysis of the objective thoughts, by means of which science lays hold of them.

Objective thoughts, which I spoke of above as the first stage towards a complete philosophical analysis of the objects of common sense, are thus seen as the link between that analysis and the objects thought of. They are the subjective aspect of the objects thought of, and at the same time the objects analysed by philosophical reflection into immediately present states of consciousness. But in what precisely does their difference from the results of purely philosophical analysis consist? The chief difference at any rate is this, that the representations which they contain are in the form of concepts or general terms, not yet reduced to perceptual form; reducing them to which is the work of philosophical analysis. A tree as object thought of is in perceptual form, as an individualised existent, real in the second sense of the term. But the objective thought of a tree is a combination of general notions. As I bring each of these in turn under immediate reflective perception, I bring it again, at the same time, into a perceptual and individualised form, though not as a real existent in the same sense as the tree. If I could have the whole of these percepts before me at once, and in perceptual form, then I should have the *intuition* of the tree, as a real existent or object thought of, just as I now have the intuition of each percept singly. But as it is, I have before me, at once, only the objective thought of the tree, the shorthand expression for it, the parts of which have necessarily the conceptual form, or are a combination of general notions. The function of philosophical analysis, therefore, is to realise the content of objective thought, but to realise it as a content of consciousness only, to realise it, so far as possible, as an intuition. It is thus

that philosophy proceeds on the subjective path, which I described it above as taking from the world of common-sense objects, the starting point which it shares with science.

Turning in the next place to the scientific path from the common starting point, the path of assuming its objects as simply existent, and tracing the laws and order of real conditioning, which obtain between them, we find the opposite aspect of objective thoughts presented to us, namely, their relation to their objects, the objects thought of or represented by them. The question is, how does science fare, and what enables it to proceed, on this track? Here it is that we are met by the remarkable fact, that these objects, the objects of thought, which are the special objects of science, are capable of a second kind of analysis, quite distinct from the philosophical, that is, from the subjective analysis of the objective thoughts which represent or mirror them, but also quite compatible with it; and not merely compatible, but one the several steps and details of which must be translateable into philosophical analysis, or capable of having their value assigned in terms of immediate perception, if they are to be accounted realities. This second analysis, in the case of material or physical objects, consists in resolving them into material parts and processes, by which they mutually act and re-act on each other, every such part and process being conceived on the general pattern or analogy of the material common-sense objects and processes from which they come, and of which they are the analysis. In other words, the analysis is into masses and forces which enter into and compose that series of transformations of energy, which underlies the whole order of Nature as it appears to sense, being itself the object not of sense but of thought.

[As an instance of what I mean, and particularly of

the distinction contained in the last few words, take the common-sense objects, or phenomena as they are called, of sunrise and sunset, the alternation of night and day, and the repeated succession of the seasons. No mere analysis of these phenomena will give their real conditioning, that is, explain how it comes, either that they are composed of the feelings,—light and darkness, heat and cold,—of which they consist, or that they happen in the order in which they do happen. No. The real conditions of these phenomena are partly the physical constitution of the heavenly bodies, as the source of motions which, acting upon our organisms, give rise to particular sensations, and partly the physical movements of the earth and other planets round the sun, which again depend upon circumstances in the physical constitution and relatively initial position of those bodies, in regard to each other.

Now the moment we bring these real conditions into our mental view, we enter upon a world of thought, as distinguished from sense. The sun is partly an object of sense, partly of thought; but the actual path of a planet round the sun is an object of thought only. So is the molecular constitution of the heavenly bodies, and of the medium, if any, of the light and heat which reach us from them. We can neither see nor touch that molecular constitution, or those molecular and other movements. We do not as yet accurately know their physical analysis, even in general terms. They are objects thought of, but not yet in detail objective thoughts. Yet they are indisputable realities. The particles, tensions, and motions of particles, are as much realities, as if we could equate them with their objective thought, that is, express their *minutiae* in terms of subjective feeling and perception. Real conditions, therefore, are objects, some of which are objects of sense as well as thought, and others objects of thought

only, though always of thought based on sense. But their conditioning power, their action and re-action with each other, and their power of giving rise to sensation, are wholly indifferent to this distinction; that is to say, belong to them independently of the degree of knowledge which we have of them, independently of the objective thoughts into which we more or less perfectly translate them.

But here I must again observe,—and of this I cannot remind you too often,—that, when real conditions are said to belong to objects thought of, and to exist independently of our thoughts of them, this does not and cannot mean, that they are not objective to reflection. Both objective thoughts and the objects thought of are objective to reflection; were it not so, they would be *purum nihil* to us, and to speak of them at all would be a contradiction in terms. Since the distinction is drawn by reflection, it is clear that both its members must be objective to reflection. That knowledge of ours, of which we say that the objects thought of are independent, is the objective thought of them, which again is the object of their philosophical or subjective analysis, not the knowledge *that* they exist with powers of their own as yet unanalysed, which is their objectivity to reflective consciousness, their reality in the first sense of the term, as explained in my last Address.

The great blunder of what may be called either the empirical or the materialist school in philosophy is, to overlook the relativity of objects thought of to reflective perception, and thus to ascribe to them an absolute character. In this way it severs the connection between science and philosophy, and the severance springs from blindness to a simple matter of fact, a matter of the plainest experience. On the other hand, it is the great blunder of the idealist schools, to make this relation a

relation of dependence, to make reflective perception causal. An idealist will urge, that after all, that is, after all our distinguishing objects thought of from objective thought, still we know nothing of the former but as the latter, that is, as states of thought, and therefore we are in a thought-world throughout. Now my answer to this is, that we know indeed nothing of what the former, the object thought of, *is*, but as a mode of thought distinguished from the latter as another mode of thought; but that we *do* know something more of *how it comes* and *how it behaves*; we know something of its real conditions, its relations to other objects thought of, and to objective thought itself; and this knowledge it is which forbids us to ascribe its production, its real conditioning, to objective thought, or to consciousness in any way whatever.]

It is just at this point that the double analysis of material things makes its importance felt. A piece of matter has one analysis into sensations and representations of sensation, which is its subjective or philosophical analysis; and another into molecules, or possibly atoms, or some other non-atomic primordial configurations of matter, together with the tensions, forces, motions, or tendencies to motion, between them or between their parts;—or even it may be into mathematical lines or points, provided that these are conceived as the seats of actual forces in interaction with each other;—which is its physical or scientific analysis. And whatever content of thought you put, by hypothesis or by inference, into the position of an object thought of, whether that content is of a physical, or of a spiritual and immaterial nature, you thereby fix it, so to speak, with the properties of an object thought of, that is, ascribe to it the possession of a real existence, independent of the degree of knowledge which we may have of its constitution and modes of action. It is thereby *posited* in thought as an

individual and concrete existent. And it is this concrete individuality which is the characteristic mark of objects thought of, as opposed to objective thoughts. An object thought of may be defined as the actually existent and individualised combination of the properties expressed in general terms by the corresponding objective thought, *plus* properties which are as yet unknown to us, but which are also actually existent and individualised. Positive theoretical science is the endeavour to exhaust these properties, to bring to book, as it were, the Dryad or other noumenal entity inside the tree, and express them in terms of objective thought, that is, in terms of consciousness. The real conditions discovered by scientific analysis derive their actual and individualised character from the common-sense objects, of which they are the analysis and, so to speak, the miniatures. Our belief in their conditioning power is derived from the same source. In short they are *real*, in the second of the two senses of this term assigned in my last Address, because the common-sense objects and events are so, which are their original source in experience. We cannot indeed say, whence their conditioning power is ultimately derived. That would be to pierce the veil of the Unseen World, by pointing out in it the real conditions of the Seen World. Philosophy may have something to say on our position with regard to this question in its Constructive Branch. But the question is one which cannot even be approached with profit, until a broad and secure foundation has been laid in philosophical analysis.

Positive science, as we have seen, never entirely quits its hold of individual objects of thought; its analysis of them, though performed by means of objective thought, is always into objects of thought again, into more and more recondite parts and operations, which it has no other means of expressing or thinking of, than by general

terms, but which are always taken as objects thought of, as real conditions and conditionates. It is for the verification of the reality of the objective thoughts, for being sure that the steps in our theorising are genuine and not imaginary, that philosophical analysis is required in science, that is, the bringing each step in thought under immediate reflective inspection. We have no intuition of objects of thought as such, that is, in their completely determined individuality, with all their parts fully determinate and standing in perceptual order in relation to each other ; that being their logical distinction from objective thoughts, which are always combinations of general terms. We therefore cannot verify our thoughts by their means. Indeed, if we had such intuitions, verification would be needless. Intuition would supersede it. Scientific omniscience would be universal. Again a great part of the reasoning in science is done by means of symbols, the meaning of which has been verified once for all, and does not require reflective analysis at every fresh use. In short, as I remarked above, the assumption of objects as ready made or absolute existents, originally made by common sense, is never retracted by science ; and I may add is never entirely abstracted from, even in the fullest tide of theorising, and flush of occupation with objective thoughts. For science uses thought solely as a means ancillary to the discovery of the real nature and power of things, as existent objects, and not as existent thoughts.

III.

IT remains in completion of our task to show the bearing of the foregoing remarks on the special province of Psychology, a province which of all others is most closely allied, and therefore also most easily confused, with that

of Philosophy. The positive sciences, from dynamics to biology, with the host of more concrete or special sciences which depend upon them, astronomy and geology for instance, are built entirely upon the physical analysis of Matter. They all aim at discovering, and then applying the results for discovering farther, the constitution and modes of operation of physical matter; which is saying, in other words, the laws governing the forces and energies of Nature, or the laws of Nature's order of real conditioning. Now in living organisms, which are the province of the highest member of this group of fonsal sciences, namely, biology, there is developed a phenomenon which has become the object of special study, a phenomenon the varied ramifications of which have made that study the parent or fonsal science of another group, the science of Psychology. The phenomenon on which it is based is that of sentience, in all its varied modes, which expressed in one word is *consciousness*. This is a great restriction of the vast domain which once belonged to psychology. Aristotle's psychology, for instance, included both the active principle or cause of Life and the separable agency of the Reason. In ordinary language, *animation* and *life* are nearly synonymous. But a large slice was carved out of this heterogeneous domain, when biology was constituted, and vital phenomena were assigned to it as its province. Thenceforward the province of psychology began, not with life, but only with conscious life, and included the phenomena of consciousness in living beings. The functions of the organism taken alone belonged to biology, and only so far as they were attended with consciousness, from the dawnings of sentience upwards, to psychology. The proper subject-matter of psychology, therefore, is the relation of consciousness to the organism which is its seat and its condition; not of course without regard to conditions external to the organism, but still with regard first

and foremost to the nature and laws of the organism which is its seat, as its proximate condition.

The group of sciences dependent on psychology consists of those which we may call *moral*, embracing every branch of investigation into the subject-matter of which consciousness in any shape enters, or has entered, as part and parcel of the phenomena to be studied. The science of language, for instance, depends upon a knowledge of the consensual, as well as the simply reflex and unconscious, action of the organs of voice and hearing; and the means by which sounds come to express wants, wishes, and ideas, is one of its chief objects. The division thus drawn between the two groups of physical and moral sciences seems moreover to be exhaustive. The simple presence or absence of consciousness in the subject-matter is the basis of the division. And no science, the subject-matter of which includes consciousness as an element, or has at any time included it while in process of formation, can be satisfactorily treated, without reference to the fontal science of psychology, which makes the genesis and laws of consciousness itself, in living organisms, its special object.

[But in calling psychology the parent or fontal science of the moral group, it must not be imagined that its establishment on a definite and sound footing, or at least its recognition as so established, preceded theirs. In point of fact, it is only quite recently that psychology has severed itself clearly from the parent stem or matrix of all positive sciences, philosophy, and taken rank as a recognised science on an independent basis, even if it can be said to have already succeeded in doing so. But when it does, both philosophy the parent and psychology the child will equally profit by the change. Philosophy will be definitely constituted and demarcated by the same event which secures the definite constitution of psychology]

The last and highest of the positive sciences will then have broken off from the common ancestral stock, which will then be seen in its essential nature. The mixing up questions of causation or real conditioning with subjective analysis is precisely the circumstance, of all others, which has been most prejudicial to philosophy ; a damage which I for one think is most strikingly exemplified in its very latest period, the period from which we are now issuing ; I mean in Kant's theory at the beginning of it, and then in the whole course of ontological speculation, to which that theory gave rise. We may see its consequences also in that section of Germany, which has "gone back to Kant," and is occupied with what they suppose was his true problem—How alone is knowledge or true experience possible? This enquiry they have named Cognitiontheory (*Erkenntnisstheorie*), and have placed it, like Kant's "Criticism," in a position intermediate between psychology on one side and metaphysic on the other. Its main question (*Grundfrage*) I find stated, incidentally, by a high authority, to be this : " How can an Object be cognised by the Subject, *i.e.*, how can its own peculiar nature, apparently consisting for itself, pass over as it were into my cognition-organ ? how can it exist in me as cognition, and in itself as thing, at the same time?"* The question is indeed insoluble in that form, and may be left to those whose minds are restricted to work by Kantian machinery. The only way of dealing with it is to transform it, by dropping the assumption which it involves ; the assumption of subjective and objective factors of knowledge, both or either, and indeed of any factor of knowledge at all. The *analysis* of knowledge is the only possible "theory" of it. But this transformation of the question also transforms "cognitiontheory" into philosophy, by removing the

* Dr. Hermann Siebeck. *Geschichte der Psychologie. Erster Theil. Erste Abtheilung.* p. 226. Gotha, 1880.

last assumption which restricts the otherwise perfect universality of its range. Metaphysic, which is philosophy, will then include cognitiontheory, and march immediately with psychology. The questions *what* and *how comes* must be kept apart ; and when once it is seen, that the great question of psychology is the real conditioning of consciousness in individual organisms, as objects thought of, or, otherwise expressed, the contribution which the percipients as real existents, and as distinguished from the things perceived as real existents, make to perception, it will then be no longer doubtful, that the great question of philosophy is the analysis of perception as such, but in its entire range, so as to obtain as its result a complete and ordered system of objective thought.]

If these remarks are well founded, the great distinction marking off the province of psychology from philosophy, and at the same time guiding psychology in its own work, is that between Consciousness and the Conditions of consciousness. It is not that between Mind and Matter, or Soul and Body. Most words importing mind or soul state as simple what is really compound. They represent consciousness and its proximate condition as clumped together, and forming one thing without distinction of parts. This supposed unit must henceforward be subjected to examination in the light of our distinction of method, in order to test the reality of its elements each for itself. Empiricists, it is true, often divorce the inseparable, as for instance when they separate perception from sensation, perception from memory, presentation from representation ; but here it would seem that they atone for this (as some might consider) by indissolubly uniting the separable. Psychology does not know, as a *datum* to begin from, that any such mental or psychical unit really exists ; for it cannot lay claim to intuitions *a priori*. Consciously sentient organisms, or individualised

consciousnesses, are its data. It thus takes up the enquiry from the common-sense point of view, beginning with percipients as individual beings, and with consciousness divided into individual lives. This is another broad distinction from philosophy; for philosophy takes consciousness, to begin with, quite generally, though, as we know from common sense, and as we also come to know as a result of philosophical analysis in harmony with common sense, it is always an individual's consciousness which it examines. Philosophy has no other course open to it, because, beginning without assumptions, it cannot possibly assume to begin with, that it already knows what an individual conscious being is. Philosophy, in fact, places itself artificially, by its method, at the point of view of an infant newly born, I mean in respect of having *all* its knowledge yet to acquire. Psychology on the other hand is in the position of a spectator watching the infant, and tracing the development of its consciousness and conscious action *ab extra*.

The real conditioning of the consciousness and conscious action of individual beings is therefore what psychology has to trace. This falls into two branches which are in interaction with each other, conditions internal to the organism and external; and the former again into conditions internal to the brain and nervous system, and conditions external to them, but still within the organism. But the proximate conditions are always, so far as we know, internal to the brain and nervous system; that is to say, conscious action and consciousness depend always immediately, either upon some state or functioning of nerve substance itself, or upon something seated in or accompanying them, whatever external conditions may have contributed to bring that state or functioning about. It is these proximate conditions, be they what they may, which are the special object of psychology.

[Furthermore it must be noted, that psychology deals with these conditions as conditions, and not as objects of consciousness. I mean, that its dealing with them as objects is entirely ancillary to its dealing with them as conditions. It has been already noted, that we have no hold of conditions but as objects of thought, and no hold of objects of thought but as objective thoughts, and therefore the two characters of condition and object are perpetually liable to be confused with each other. When psychology, for instance, speaks of a red object being seen as red, it is speaking of the object denotatively, and means that object which, as condition, so acts upon the nerve of sight, also as condition, as to produce the perception of redness. When psychology says *an oak tree*, it means a bundle of real conditions, which in interaction with another bundle in the organism, produce, in the organism, the bundle of perceptions which common sense designates by that name. When philosophy says *an oak tree*, it is that bundle of perceptions which is meant. And thus philosophy stands one degree nearer than psychology to common sense; which is exactly in harmony with the relation of both to their common starting point, as explained in the former part of my Address. It is the *operation* of the objects conducive to results in consciousness, not the analysis of the objects as objects of consciousness, which psychology has in view.]

The relation, then, between states and processes of consciousness, on the one hand, and their two sets of conditions, external and internal to the nervous system, but chiefly the latter as the proximate conditions, is the province of psychology; and we can now see precisely what territory belongs to it in common with philosophy. It is that undivided half or aspect of states of consciousness, by which they stand connected with their proximate real conditions, within their own organisms, whatever

these conditions may prove to be, abstraction being made from the rest of the panorama, of which they are components. Psychology, therefore, occupies the whole field of consciousness, but under the restriction not only of taking it piecemeal, but also of taking each selected part in connection with its conditions of genesis, and with the states of consciousness, if any, which it conditions. Or more briefly, its special field consists of states of consciousness in their character of real conditionates or conditions.

If the vague expressions *introspection* and *inner phenomena* are capable of meaning, (for sometimes they seem meant only to mystify,) we mean or ought to mean philosophical reflection by the one, and consciousness as its immediate object by the other. If you could look within the brain and see consciousness at work inside, you would then get an *external* view of consciousness, and be regarding it *ab extra*; this would be no *introspection* of *inner* phenomena. Reflection alone is introspection. Connecting consciousness with its conditions is not the work of introspection; but introspection, in its true sense of philosophical reflection, is the philosophical basis upon which psychology, the connecting of consciousness with its conditions, stands; and this is a basis furnished by philosophy to all sciences alike. Philosophy analyses consciousness; psychology seeks the real conditions of its several moments, states, or events. As psychology on the side of conditions is connected with the physical sciences through biology, and has the domain of real conditioning in common with them, so on the other side it is connected with philosophy through having consciousness as common subject-matter, the individual form of which it traces in the genesis both of the whole and of the parts of an individual's experience.

The laws which govern the connection of conscious-

ness with its proximate real conditions being thus marked out as the main object of psychology, it is plain, that the first and most essential task of that science must be, to frame a distinct idea of the general kind of agency or agencies exerted by those conditions. Without this nothing but confusion can ensue. Let us see, then, within what limits the agencies in question must lie. It seems to me, that three hypotheses are possible on this point, and three only, though admitting combination :

1. A spiritual or immaterial entity inhabiting the body.
2. Physiological action in the nerve organism.
3. Energy in consciousness itself, or its states, as such.

A word or two on each of these in turn.

1. The hypothesis of a spiritual entity, called variously soul, mind, spirit, self, or ego, inhabiting the body, has the support of tradition and antiquity in its favour. From its immateriality it seems to be of kindred nature to its conditionate, consciousness, and also to offer a principle of union between conscious states, inasmuch as, being immaterial, it can be imagined as having no parts occupying space. On the other hand, its nature or mode of existence is difficult to realise in thought; and still more difficult to see how it can exert a real conditioning power.

2. The hypothesis that physiological action is the proximate real condition of consciousness has to contend with the apparent dispartateness in kind between itself and its conditionate. Between matter and feeling there seems to be no bridge. On the other hand, a great part of the weight of this difficulty is removed, when we consider, that a bridge, that is to say, some correspondence or similarity of nature, is not by any means so indispensable to thought between condition and conditionate,

as it is between cause and effect, on the old conception of causation. By the old conception of causation, I understand an agency which includes *origination* as well as influence. And be it noted in passing, that the idea of origination is read by carelessness into common-sense objects taken as conditions, just as that of absolute existence is read into common-sense objects taken simply. A cause is that which *proprio marte* makes a thing to be so and so, whereas a condition is that without which another thing would not be so and so. A cause puts something of itself into its effect; a condition not necessarily so; and therefore total disparateness between antecedent and consequent is fatal in the one case, but need not be so in the other. It is thus quite conceivable, that physical processes may be the sole and sufficient proximate conditions of consciousness, though they could never figure as their sole and sufficient cause.

3. The hypothesis, that the real conditioning of consciousness resides in consciousness itself, has two forms. One of these appeals to the fact, that we literally know of nothing whatever except in the form of consciousness, either as states or grouping of states, activities or grouping of activities, of consciousness; and therefore, since beyond consciousness there is literally nothing, we are restricted to look for its real conditioning within itself, as some productive or organising energy of its own. On the other hand, it is difficult to see, how any particular feature, which might be selected as the agency in question, such for instance, as thought, or will, or conscious *nexus*, or imagination, or self-consciousness, which is known only as part and parcel of consciousness, and therefore would seem to depend as much on other parts of consciousness as other parts on it, can at the same time be the real condition of consciousness, a relation which requires that the condition should be conceived as capable

of existing independently of its conditionate. We seem to be unable to form a distinct conception of any such feature as an independent existent, and still less of its mode of operating as a real condition. This form of the hypothesis, therefore, seems inapplicable in psychology, which seeks the conditions of consciousness in individual cases, whatever may be its value as the basis of that theory of the Universe, which makes universal consciousness, as such, to be *Causa Sui et Mundi*. If understood of a particular consciousness, it reverses the relation which a science of psychology presupposes; inasmuch as it represents consciousness to be the real condition of all its objects, instead of being itself conditioned upon some of them; the psychological question being,—upon *which*. To adopt this form of the hypothesis would be to transcend the limits of psychology as a positive science, and put a psychological philosophy, a psychological theory of the Universe, in its place.

The other form of the hypothesis points to feelings, particularly to those of pleasure and pain, and those which are involved in volition, as really operative links in the chain of conscious states and conscious action. It is not put forward to account for the genesis of consciousness, and therefore it must be regarded as subsidiary to the first hypothesis, namely, that of an immaterial entity, upon which it leans. The feelings to which it attributes a real efficacy in modifying the course of consciousness are supposed to be also, and at the same time, states or functions of the immaterial entity of the first hypothesis. The two hypotheses thus mutually support each other, and their position is a very strong one. *We feel*, it is said, the pain of a burn, and therefore draw back our hand. *We know*, it is said, the advantage of learning, and therefore set ourselves to acquire it. If the feeling and the knowledge, states of consciousness, had not efficacy, either as

states of consciousness or as states of mind, the consequences mentioned would not follow. States of consciousness, therefore, it is argued, are real and effective links in the chain of causation.

On the other hand it may be replied, that no proof has ever been given, that the efficacy resides in the states of consciousness or mind themselves. A burn is occasioned by physical agencies, and if the action set up thereby in the nerve-system were to run its course, the concomitant feeling, *and that only*, being removed, the same action of withdrawing the hand would follow. We cannot try the experiment, because, were we to remove the pain of the burn, by anaesthetics or otherwise, we could not tell that the physical nerve-action was thereby unaltered. So in the other case of knowing the advantage of learning. To remove the knowledge, it may be said, would involve alteration of the brain-processes, which we have reason to suppose accompany it; and therefore we can never be sure, that the setting ourselves to acquire learning, which seems to be its consequence, is really due to the knowledge as a state of mind or consciousness, and not to the brain-process.

I am not the first to make these remarks, which seem to me very materially to weaken the case for the hypothesis in question. The phenomena appealed to are concrete phenomena, described as they appear to common sense: *We feel and draw back our hand; We know and set ourselves to acquire.* The question is, what is the psychological, the scientific, analysis of these phenomena. Are they resolvable into a mental entity, its states and operations, in conjunction with a body and its physical operations; or are they resolvable into a body and its physical operations, in conjunction with states of consciousness conditioned by them? Supposing the former analysis adopted, two difficulties still remain, to one or other of

which the hypothesis is subject. The first is that of forming a distinct notion of how states of consciousness, as such, can operate either upon one another, or upon matter, or upon mind; the second that of seeing how states of consciousness can be also states of an immaterial entity. The mere circumstance, that both states of consciousness and the entity of mind are conceived as immaterial, goes but a very little way towards showing how the former are united with the latter as its states or actions. It will be remembered that, under the head of the first hypothesis, we found a corresponding difficulty with regard to the mode of operation of the immaterial entity itself.

Now questions of this kind; questions relating to the choice of its fundamental hypothesis, seem to me to lie at the very threshold, or rather at the very root, of psychology. Unless we proceed on some distinct hypothesis concerning the real agencies which are at work, we are merely giving a preliminary description and provisional classification of the phenomena, and can make no claim to have placed psychology on the footing of a science. Besides, the very description and classification of the phenomena are greatly influenced by the point of view from which they are seen, and by the choice of central facts round which to group them. But what do we mean by central facts? Surely, in any science, those facts are central, which are the most generally present and constant facts in the play of the forces of which the conditioning consists. For instance, the distinction and classification of the main functions of consciousness, which are usually taken as three, feeling, knowing, and acting, will assume a different appearance according as the functions are regarded as functions of an immaterial entity or of a material organism. Again, the so-called Laws of Association will inevitably come out in a very different shape, if supposed to be governed by laws of mind, from what they

will present if described in connection with the concomitant brain-processes.

The revolution which has recently taken place and is still going on in psychology, and to which its present proud position among the positive sciences is owing, consists in bringing the phenomena of consciousness, that is, its states and processes, into immediate connection with those physiological processes which are the object of our second hypothesis. The revolution is most conspicuous in that department of psychology which is known as Psychophysics, where experiment as well as observation is applied to the phenomena, by recording the minute variations in consciousness, particularly in the time required for their manifestation, produced by varying the external stimuli brought to bear on nerve and brain. The phenomena of consciousness are thus made amenable to *measure*, and it is clearly owing to their connection with the physical world through the physiological, which contains their proximate conditions, that they are so.

Yet there is in many quarters, and not least among scientific psychologists, a strange reluctance to place the science avowedly on the footing of an investigation into the real conditions of consciousness, and avowedly to follow it up so far only as its real conditions of known kinds, that is, its *veræ causæ*, will carry us. Its scientific character rests upon this kind of investigation alone, and comes to an end with it. Yet while all are eager to claim a scientific character for psychology, many are reluctant to admit the *limits* of the science, by avowing upon what it is, that its scientific character really rests.

A few words will suffice to give the rationale of this reluctance, or rather to explain the state of opinion which supplies a plausible pretext for indulging it. And this at the same time will bring us back to our main subject, the true relation between philosophy and science. The old

conception of philosophy is, that it proposes to assign the ultimate essence of things as objects thought of, or what is equivalent, of real existents in the second sense of *reality*, and finally of that real existent which was supposed to underlie and cause the relation of Subject and Object everywhere, and in its whole extent. The *Being* of things was to be explained out of themselves; their essence and their existence were to be shown coincident, their essence causal, and their cause essential; as if the Universe was given *a priori* as a finite organism. Philosophy thus had marked out for it that task which Claude Bernard asserts to be futile, in the passage quoted above, namely, to show the *essence* and the *why* of things. It was a task which was exactly the same as that of science, proceeding on exactly the same line of analysing objects thought of, or existents in the second sense of *reality*, but with this sole difference, that it aimed beyond science on the same line, beyond the point where all means of analysing existents, in that sense, failed. Science stopped short at what were called *conditions*, philosophy went on to what were called *causes*, and beat its wings in a vacuum.

I have already explained to you, how different the new conception of philosophy is from this old conception of a search for the hidden causal essence of things. Instead of going on beyond science on the same line, it turns back to contemplate our knowledge of things, to contemplate science contemplating things, the world and science together being its object; leaving the real conditions of things wholly to science, and therefore ceasing to expect positive knowledge of them where science drops its pursuit. Metaphysic no longer means *physic in vacuo*, but *physic in conspectu*, or *sub judice*. Physical science transcends itself, that is, becomes Metaphysic, by reflecting on itself as a subjective process of knowing, and on the

relation between that process and the object of it, which is physical nature, or Matter. It thus becomes self-conscious, conscious of its own *nature*, as well as of its own purpose. The name *metaphysic*, originally due to a literary accident, could not have been more happily chosen, if Aristotle's express purpose had been to characterise the analytic part of philosophy, by bringing out the relation which it bears to science. Metaphysic, in short, transcends physic, not by mimicking its method of hypothesis and verification in cases where they are no longer applicable, but by an independent method of its own, which enables it to contemplate the physical method itself as a component part of the whole field of consciousness, and which is unlimited by the assumptions on which the physical method is founded.

Apply this to the case of psychology, and you will at once apprehend its present position. The traditional assumption of psychology is that of an immaterial entity, as the causal essence, or substantia, of which consciousness is the attribute, or phenomenal manifestation. Just as there was thought to be a material substrate beyond phenomenal matter, or material objects, so beyond phenomenal mind, or persons, there was thought to be an immaterial substantia; and the terms mind and matter alike have the same ambiguity about them; matter, at least in pre-Berkeleyan times, meaning now the substrate now the phenomenon, and mind, even at the present day, meaning now the entity and now its manifestation, phenomenal mind or individual consciousness. Noumenal mind, or mind as entity, is therefore precisely one of those pretended philosophical explanations, which according to the old conception of philosophy it was the business of philosophy to give, according to the new conception of it to analyse as a conception.

For in fact, the *giver* of the explanation is not philoso-

phy, but crude and presumptuous common sense. The explanation is an assumption seeking its justification. Yet simply on the ground that the business of philosophy is to assign the causal essence of things, the assumption is treated as a truth, lest philosophy's occupation should be gone. And in fact the occupation of the old philosophy, philosophy as a search for causal essences, *is* gone,—gone for ever,—gone where causal essences go, wherever that may be. Those who still think after this fashion exactly reverse the relative positions of philosophy and psychology, as I conceive them, besides altering their functions. Psychology, taken apart from philosophy, becomes a preliminary description of states of consciousness together with the circumstances in which they occur; and philosophy comes in afterwards to connect them with their real condition, soul or mind as an entity, the enquiry into causal entities being its peculiar province.

Now you will find two sets of psychologists who still keep up the old illusion. One of these honestly believes in mind as a causal entity, and therefore represents psychology as consisting of a philosophical part, which investigates the nature of mind, or whatever else the *psyche* in psychology may stand for, as an entity, and of a phenomenal part, which treats of the laws and occasions of its manifestation. The two parts together constitute the whole science of psychology. And you will observe, that it possesses at least that characteristic of a true science, which consists in connecting phenomena with their real conditions. For "mind," supposing it to exist, is clearly a real condition, though it is also more besides, namely, cause, or originating essence of its phenomena. And it is quite possible, that there may be some real existent in the place indicated by the name, that is, an existent which, unknown to us, is a real condition of consciousness, though not the cause or substantia of its states.

I should be sorry if I were understood to assert, that no real conditions exist but physical ones. This is a negative which, to say the least, it would be difficult to prove. My meaning is, that science requires us not to go beyond those kinds of real conditions which are positively known to us, and that we have within those limits, and without recourse to conditions, the evidence for which consists solely in the assumptions of an antiquated philosophy, a positive and experimental science. I am quite prepared to admit, that there may be powers operating in the organism, in the real conditioning of consciousness, which are wholly unknown and unimagined by us. And moreover I think that a corresponding admission must be made in the case of inorganic matter also. The very substitution of condition for cause, in science, when the idea is applied to so complex an existent as matter is shown to be by its physical analysis, carries with it the necessity of supposing, that matter itself has its real conditions of existence beyond itself, and therefore beyond our positive knowledge, conditions which belong to a world as real and phenomenal as if we had a direct knowledge of it, but at the same time conditions which can form no part of any merely physical theory of matter. For while causes are things supposed to exist ready made in nature, like pre-Darwinian species, which in fact are one case or instance of them, conditions on the contrary we know to be divisions introduced by ourselves, as a means of discovering the one real undivided order of Nature's operations, an order which is as unbounded by our limitations, as it is undivided by our divisions. And in fact we find, that no physical theories of matter, however daring, ever travel beyond the assumption of matter in some form or other, though a form more recondite, or more primordial, than that for which it is called on to account. In short the physicist

assumes Matter in general, just as the philosopher assumes Consciousness in general, not individualised, as his necessary basis of procedure. Just as philosophy discovers in the world of common-sense objects a single undivided stream of consciousness, which it is its business to analyse, so science discovers in it a single undivided order of natural operation, the laws of which it is its business to discover. It is therefore no part of the present method to assert, that human faculties are adequate to exhaust the whole economy of organic and inorganic nature. But this is a very different thing from denying the possibility of an entity, the whole conception of which rests on fallacious assumption.

The other class of psychologists comprises those who, having no reliance on the theory of an immaterial entity, connect consciousness with its physical and physiological conditions in a strictly scientific manner, whether in psychophysics or in other branches, but at the same time profess, that they are merely treating the *phenomena* of the subject, and that the real nature of mind is a question for philosophy. As if the consideration of the real nature of anything which is admitted to be a real condition of consciousness could be omitted from psychology, and yet psychology could preserve its scientific character. These two things are incompatible. To restrict the enquiry to the phenomena of the subject is to profess a belief in the existence of "mind" as noumenon; and then, supposing it to exist, the enquiry into its nature and operation is the very nerve of a scientific psychology. Either psychology is a science, and then it must face the question of the real conditions of consciousness in its length and breadth, or it evades it and becomes a mere preliminary investigation of no particular importance.

Neither will it escape you, how injurious to philosophy is this attempt to put off upon its shoulders an

inconvenient and indeed impossible task, as the psychologists in question well know it to be, the wild-goose chase of mind as an entity. Philosophy exposes the fallacy of the conception ; it is hardly fair to saddle it with the capture of the thing. Psychologists of this class are lingering too long in the position of Hartley, the illustrious founder of scientific psychology in its differentiation from philosophy, in contrast with the undifferentiated state in which it is presented by Locke ; Hartley, as you are aware, retaining nominally the soul or mind, as the real agent, but making use only of nerve and brain processes as actual means of explanation. It is surely time that Hartley's position in this matter should be revised.

And now I have only to say in conclusion, that what I have tried to lay before you in outline is a sketch of the position of philosophy in relation to the other branches of speculative knowledge, by pointing out, 1st its special problem, 2nd its special method. Philosophy in our days has to renew the fight for its bare existence. The natural man regards the unfortunate philosopher somewhat as the Northern Farmer regarded the Rector :

"Larn'd a ma' beä. I reckons I 'annot sa mooch to larn."

On the other hand, scientific men are a little impatient at attempts to construct the universe, which, if they did not invariably break down, would involve constructing the sciences of experiment and observation *a priori*. Such attempts seem to me somewhat as if the mites of a cheese should try to construct a theory of dairy-farming. We are encompassed by a world as phenomenally real, and yet as much beyond our powers of observation, as are the dairy and the farm to the mites in a cheese. Dairy-farming is not the *noumenon* of which the cheese and its mites are the *phenomena*. It is unspeakable the mischief that this crude notion of a hidden reality mani-

festing itself in phenomena has done to human wits. And it is plain that the cure does not lie in professing to know that fiction, the noumenon, and thereby read the riddle of the universe; still less, if possible, in treating the unknown as something with which we have no practical concern; for this is wilful blindness to a fact, and that fact one the pondering on which is a powerful, possibly an indispensable, agency in sustaining the moral and spiritual life. The real cure lies in knowing the limits of our knowledge, and in determining what attitude of mind we shall adopt in presence of that unseen but actual and real world.

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